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Response to Rezaeian: Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) extension for ecological studies.

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In reply:

We thank Mohsen for his comments on the Strengthening the Reporting of Observational Studies in Epidemiology strengthening the reporting of observational studies in epidemiology (STROBE) Statement[1,2]. The decision to focus on the three main epidemiological study designs, cross-sectional studies, cohort studies, and case–control studies was deliberately taken by the group when defining the scope of STROBE. As Rezaeian points out, several extensions to address the reporting issues that arise in specific studies and contexts have since been published[3,4] and other extensions are in preparation.

We agree with Mohsen Rezaeian that an extension of STROBE to ecologic studies might be worth considering. In fact, the recent review of cross-sectional ecologic studies[5] mentioned by Rezaeian not only highlighted the methodological shortcomings of ecologic studies published in major epidemiology journals, but also proposed a draft extension to STROBE to improve the reporting of these studies. Dufault and Klar[5] suggested several items that should be reported in ecologic studies, including, for example, the intended level of inference or possible cross-level bias. Their list of items could serve as a useful point of departure for an extension of the STROBE statement to cross-sectional ecologic studies. Other types of ecologic studies exist, for example, studies based on longitudinal data; additional reporting issues might arise in these situations.

We encourage Mohsen Rezaeian to assemble a working group of interested epidemiologists and editors who will build on the evidence on the reporting of ecologic studies and proposals to improve their reporting[5] to develop an extension of STROBE for ecologic studies. Detailed explanations on the rationale for the different recommendations, similar to the explanation and elaboration article written for STROBE[2], would strengthen such recommendations and provide a welcome service to the

field. We are pleased to report that several members of the STROBE group have expressed an interest in contributing to this effort.

References

1. E. von Elm, D.G. Altman, M. Egger, S.J. Pocock, P.C. Gotzsche, J.P. Vandenbroucke, et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. J Clin Epidemiol, 61 (2008), pp. 344-349. PubMed PMID: 18313558. Epub March 4, 2008.

2. J.P. Vandenbroucke, E. von Elm, D.G. Altman, P.C. Gotzsche, C.D. Mulrow, S.J. Pocock, et al. Strengthening the Reporting of Observational Studies in Epidemiology (STROBE): explanation and elaboration. PLoS Med, 4 (10) (2007), p. e297. PubMed PMID: 17941715. Pubmed Central PMCID: 2020496. Epub October 19, 2007.

3. J. Little, J.P. Higgins, J.P. Ioannidis, D. Moher, F. Gagnon, E. von Elm, et al. Strengthening the reporting of genetic association studies (STREGA): an extension of the strengthening the reporting of observational studies in epidemiology (STROBE) statement. J Clin Epidemiol, 62 (2009), pp. 597-608 e4. PubMed PMID: 19217256. Epub February 17, 2009.

4. V. Gallo, M. Egger, V. McCormack, P.B. Farmer, J.P. Ioannidis, M. Kirsch-Volders, et al. STrengthening the Reporting of OBservational studies in Epidemiology–Molecular Epidemiology STROBE-ME: an extension of the STROBE statement. J Clin Epidemiol, 64 (2011), pp. 1350-1363. PubMed PMID: 22030070. Epub October 28, 2011.

5. B. Dufault, N. Klar The quality of modern cross-sectional ecologic studies: a bibliometric review. Am J Epidemiol, 174 (2011), pp. 1101-1107. PubMed PMID: 21940800. Epub September 24, 2011.